

WHAT IS CLAIMED IS:

1. A tire comprising two beads, a crown provided with a tread and first and second sidewalls connecting said crown to said beads, said beads comprising radially on the inside portions which make an angle open axially and radially outwards and intended to be in contact with a rim comprising rim seats inclined at an angle γ which is also open axially and radially outwards, said tire being reinforced by a carcass reinforcement comprising at least one carcass ply formed of reinforcements parallel to one another in the ply and making an angle α relative to the circumferential direction such that $60^\circ \leq \alpha \leq 90^\circ$, said reinforcement being anchored in each bead to at least one annular anchoring element, and the carcass reinforcement being surmounted radially by a crown reinforcement itself surmounted by the tread,

the first and second sidewalls each having an additional, inextensible ring located axially inside the axially outermost carcass ply,

the line segment passing through the center of gravity G8 of the section of the ring in the first sidewall and through the anchoring ring in the bead located in the extension of said first sidewall making an angle β_1 with the rotation axis which is open towards the outside,

the line segment passing through the center of gravity G8' of the section of the ring in the second sidewall and through the anchoring ring in the bead located in the extension of said second sidewall making an angle β_2 with the rotation axis which is open towards the outside,

each sidewall comprising a coupling section located radially between the additional ring and the annular anchoring element in the bead, said tire, when mounted on its service rim and inflated to the recommended

pressure, wherein, as viewed in meridian section, the angle β_1 is different from the angle β_2 .

2. The tire according to Claim 1, wherein the first sidewall is intended to be positioned on the outside of a vehicle to which said tire is fitted.

3. The tire according to Claim 1, wherein the angle β_1 measured in the first sidewall is smaller than the angle β_2 measured in the second sidewall.

4. The tire according to Claim 3, wherein the first sidewall is intended to be positioned on the outside of a vehicle to which said tire is fitted.

5. The tire according to Claim 3, wherein the angle β_1 measured in the first sidewall is equal to at most 70° and the angle β_2 measured in the second sidewall is larger than 70° .

6. The tire according to Claim 5, wherein the angle β_2 measured in the second sidewall is between 75° and 100° .

7. The tire according to Claim 1, wherein the additional ring of the first sidewall is located radially a distance H_1 from the bottom of the bead and the additional ring of the second sidewall is located radially a distance H_2 from the bottom of the bead, these distances H_1 and H_2 being smaller than two-thirds of the height H of the tire on its mounting rim, said height H being measured between the bottom of the bead and the point on the crown in the equatorial plane of the tire.

8. The tire according to Claim 7, wherein the height H_1 is larger than the height H_2 .

9. The tire according to Claim 8, wherein the height H_1 is larger than one-third of the height H of the tire on its rim.

10. The tire according to Claim 1, wherein in each sidewall, the coupling section axially inside the axially outermost carcass ply is made of an elastomeric material having Shore A hardness equal to at least 65.

11. The tire according to Claim 1, wherein the carcass reinforcement is formed of at least two plies of reinforcement elements parallel to one another in each ply and making an angle α with the circumferential direction such that $60^\circ \leq \alpha \leq 90^\circ$, at least one of the plies being anchored in each bead by wrapping around the anchoring element in the bead, and the second ply, called the axially inner ply, being located axially inside the additional sidewall ring and the coupling section between the additional ring and the anchoring element in the bead.